

CLAIMS

1. Equipment for the repair of asphalt surfaces comprising a single vehicle road repair system with means for supplying infrared heat to the surface to be repaired, means for storing and supplying hot new asphalt, means for storing and supplying a rejuvenation liquid, and means for storage and supply of gas for heating.
- 5 2. Equipment according to Claim 1, in which the single vehicle is a truck.
- 10 3. Equipment according to Claim 2, in which the truck is fitted at the rear with an infrared heater system that is adapted to be moved towards and away from the surface to be repaired.
- 15 4. Equipment according to any of the preceding Claims fitted with a hot box that contains replacement asphalt.
5. Equipment according to Claim 4 also containing an adjacent tank for rejuvenation liquid wherein the hotbox residual heat is used to maintain the working temperature of the rejuvenation liquid.
- 20 6. Equipment according to any of the preceding Claims, in which the means for supplying the rejuvenation liquid comprises a pump and lance.
7. Equipment according to any of the preceding Claims, provided with a tow bar for towing a trailer-mounted compaction roller.
- 25 8. Equipment according to any of the preceding Claims in which the infrared heating system is hinged so that it may be folded up against the back of the truck.
- 30 9. Equipment according to Claim 1, in which the vehicle is a tractor backhoe or wheeled or skid-steer loader.
10. Equipment according to Claim 9 in which the attachment that forms the infrared heater is fixed to the dipper arm (of a backhoe loader) or the front loader quick change system (of a skid steer) so that it may be moved towards and away from the surface to be repaired.

11. Equipment according to Claim 10, in which the attachment contains the associated gas bottles and control systems.
12. Equipment according to Claim 10 or Claim 11, provided with an attachment fitted to the 5 rear of the vehicle containing a hot box for new asphalt, an adjoining tank for rejuvenation liquid that uses the hotbox residual heat to maintain a good working temperature, and a spray lance for its application to the raked area.
13. Equipment according to any of the preceding Claims provided with a control system for 10 the heater.
14. Equipment according to Claim 13 in which the control system enables independent on/off control of each burner or set of burners within the heater.
15. Equipment according to any of the preceding Claims in which the heater blanket is made 15 of Fecralloy®.
16. A process for repairing damaged asphalt in which the damaged area to be repaired is heated using one or more LPG powered infrared heaters to a depth of 10 mm to 100 mm 20 from the surface wherein the average heating temperature is from 50 to 200°C, and the heating is for from 5 to 20 minutes, once heated, the damaged area is raked and/or scarified, the rejuvenating liquid comprising emulsified oils high in aromatics with high levels of polar compounds is then applied to the raked and/or scarified area, the surface is then compacted and allowed to cool and harden for at least one hour.
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17. A process according to Claim 16 in which the rejuvenating liquid contains from 30 to 80 parts by weight in total of a heavy paraffin distillation solvent extract and a heavy naphthenic distillate solvent extract, from 10 to 60 parts by weight of water, and from 1 to 5 parts by weight of the emulsifier.
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18. A process according to Claim 16 or Claim 17 in which precoated chippings are added on hot rolled asphalt and compacted into the surface to give road texture.
19. A process according to any of Claims 16 to 18 in which a topcoat of a sealer/binder is 35 also applied.

20. A process according to any of Claims 16 to 19 in which a dusting of fine aggregate is added to ensure good initial skid resistance.